Claims

1. Method for estimating data units (d11, d12, d13, d14, d21,
   d22, d23, d24) transmitted via a radio channel in a radio
   block (d), by which
- the transmitted data units (d11, d12, d13, d14, d21, d22,
   d23, d24) cause a signal sequence (S) to be received in a
   receiving station (BS),
- the components (K1, K2, K3, K4, K5, K6, K7, K8, K9, K10) of
   the received signal sequence (S) are assigned in the time-
   sequence of their receipt to at least a first signal block
   and a second signal block (X1, X2, X3; Y1, Y2, Y3) and are
   processed block by block, whereby the signal blocks (X1, X2,
   X3; Y1, Y2, Y3) overlap in such a way that at least one
   component (K3, K4, K5, K6, K7, K8) of the received signal
   sequence (S) belongs to both signal blocks (X1, X2, X3; Y1,
   Y2, Y3),
- and, by reference to the components of both signal blocks
   (X1, X2, X3; Y1, Y2, Y3), estimated values are determined
   for the data units (d11, d12, d13, d14, d21, d22, d23, d24)
   which were transmitted.

2. Method in accordance with claim 1, in which
the overlapping of the signal blocks (X1, X2, X3; Y1, Y2, Y3)
is effected in such a way that there is at least one of the
data units (d13, d14, d21, d22) which was transmitted for
which estimated values are determined by reference to each of
the two signal blocks (X1, X2, X3; Y1, Y2, Y3).

3. Method in accordance with claim 2, in which
after both the estimated values have been determined, the
estimated value determined by reference to one of the two
signal blocks (d1, d2, d3) is used exclusively for the at

least one data unit (d13, d14, d21, d22) which was trans-
mitted.

4. Method in accordance with claim 1, 2 or 3 in which
a cyclic transfer matrix (C1, C2, C3) is assigned to each of
the signal blocks (Y1, Y2, Y3), and the estimated values are
calculated by multiplying the signal blocks (Y1, Y2, Y3) by
the relevant inverse transfer matrix.

5. Method in accordance with claim 1, 2 or 3 in which
a transfer matrix (H1, H2, H3) with a Töplitz structure and
band structure is assigned to each of the signal blocks (X1,
X2, X3), and the estimated values are calculated by multi-
plying the signal blocks (X1, X2, X3) by the relevant pseudo-
inverse transfer matrix.

6. Receiving station (BS) with
- facilities (SE) for receiving a signal sequence (S) arising
  from data units (d11, d12, d13, d14, d21, d22, d23, d24)
  transmitted in a radio block (d),
- facilities (P) for assigning the components (K1, K2, K3, K4,
  K5, K6, K7, k8, k9, K10) of the received signal sequence (S)
  in the time-sequence of their receipt to at least a first
  signal block and a second signal block (X1, X2, X3), and
  with facilities (P) for processing the signal blocks (X1,
  X2, X3) block by block, whereby the signal blocks (X1, X2,
  X3) overlap in such a way that at least one component (K3,
  K4, K5, K6, K7, K8) of the received signal sequence belongs
  to both signal blocks (X1, X2, X3),
- and facilities (P) for determining, by reference to the
  components of both signal blocks (X1, X2, X3), estimated
  values for the data units (d11, d12, d13, d14, d21, d22,
  d23, d24) transmitted.